

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended): A method of driving a semiconductor display device comprising a plurality of pixels, each containing a pixel TFT and a pixel electrode; an opposing electrode; and a liquid crystal formed between the pixel electrode and the opposing electrode; wherein display signals are input to the pixel electrode through the pixel TFT, wherein each of the display signals input to the pixel electrode has one of a positive polarity and a negative polarity, with an electric potential of the opposing electrode as a standard, wherein display signals input to pixel electrodes in a vertical line have a same polarity and the same polarity is independently controlled for each vertical line of the plurality of pixels, and wherein pixels to which display signals having a particular polarity are input are changed irregularly in a certain fixed period.

Claim 2 (Currently Amended): A method of driving a semiconductor display device comprising a plurality of pixels, each containing a pixel TFT and a pixel electrode; an opposing electrode; and a liquid crystal formed between the pixel electrode and the opposing electrode; wherein display signals are input to the pixel electrode through the pixel TFT, wherein each of the display signals input to the pixel electrode has one of a positive polarity and a negative polarity, with an electric potential of the opposing electrode as a standard, wherein display signals input to pixel electrodes in a vertical line have a same polarity and the same polarity is independently controlled for each vertical line of the plurality of pixels, and wherein pixels to which display signals having a particular polarity are input are changed irregularly in a certain fixed period, to an extent that flicker becomes ~~become~~ difficult to observe.

Claim 3 (Currently Amended): A method of driving a semiconductor display device comprising a plurality of pixels, each containing a pixel TFT and a pixel electrode; an opposing electrode; and a liquid crystal formed between the pixel electrode and the opposing electrode; wherein display signals are input to the pixel electrode through the pixel TFT, wherein each of the display signals input to the pixel electrode has one of a positive polarity and a negative polarity, with an electric potential of the opposing electrode as a standard, wherein display signals input to pixel electrodes in a vertical line have a same polarity and the same polarity is independently controlled for each vertical line of the plurality of pixels, and wherein pixels to which display signals having a particular polarity are input are changed irregularly in a certain fixed period, to an extent that vertical striping becomes ~~become~~ difficult to observe.

Claim 4 (Currently Amended): A method of driving a semiconductor display device comprising a plurality of pixels, each containing a pixel TFT and a pixel electrode; an opposing electrode; and a liquid crystal formed between the pixel electrode and the opposing electrode; wherein display signals are input to the pixel electrode through the pixel TFT, wherein each of the display signals input to the pixel electrode has one of a positive polarity and a negative polarity, with an electric potential of the opposing electrode as a standard, wherein the pixel electrodes are arranged in multiple vertical lines and ~~wherein display signals input to pixel electrodes in a vertical line have a same polarity~~ polarities of the display signals input to pixel electrodes in a vertical line change together, and wherein a particular polarity of display signals input to the pixels electrodes in the vertical line is changed randomly in a certain fixed period.

Claim 5 (Canceled)

Claim 6 (Previously Presented): A method of driving a semiconductor display device according to claim 1, wherein a polarity of display signals input to only some of the pixel electrodes changes in two adjacent frame periods.

Claim 7 (Currently Amended): A semiconductor display device comprising:
a source signal line driver circuit;
a gate signal line driver circuit;
a plurality of source signal lines;
a plurality of gate signal lines;
a pixel portion; and
a display signal generation portion,
wherein the pixel portion has a plurality of pixels, each containing a pixel TFT and a pixel electrode,
wherein the display signal generation portion has: a control portion; a polarity data signal generation portion; an alternating current signal generation portion; a display signal selection portion; a + side display signal generation portion; and a - side display signal generation portion,
wherein display signals input to pixel electrodes in a vertical line have a same polarity and the same polarity is independently controlled for each vertical line of the plurality of pixels, and
wherein pixels to which display signals having a particular polarity are input are changed irregularly in a certain fixed period.

Claim 8 (Currently Amended): A semiconductor display device comprising:
a source signal line driver circuit;
a gate signal line driver circuit;
a plurality of source signal lines;
a plurality of gate signal lines;
a pixel portion; and

wherein the pixel portion has a plurality of pixels, each containing a pixel TFT and a pixel electrode,

wherein the display signal generation portion has: a control portion; a polarity data signal generation portion; an alternating current signal generation portion; a display signal selection portion; a + side display signal generation portion; and a - side display signal generation portion,

wherein display signals input to pixel electrodes in a vertical line have a same polarity and the same polarity is independently controlled for each vertical line of the plurality of pixels, and

wherein pixels to which display signals having a particular polarity are input are changed irregularly in a certain fixed period, to an extent that flicker becomes ~~become~~ difficult to observe.

Claim 9 (Currently Amended): A semiconductor display device comprising:

a source signal line driver circuit;

a gate signal line driver circuit;

a plurality of source signal lines;

a plurality of gate signal lines;

a pixel portion; and

a display signal generation portion,

wherein the pixel portion has a plurality of pixels, each containing a pixel TFT and a pixel electrode,

wherein the display signal generation portion has: a control portion; a polarity data signal generation portion; an alternating current signal generation portion; a display signal selection portion; a + side display signal generation portion; and a - side display signal generation portion,

wherein display signals input to pixel electrodes in a vertical line have a same polarity and the same polarity is independently controlled for each vertical line of the plurality of pixels, and

wherein pixels to which display signals having a particular polarity are input are changed irregularly in a certain fixed period, to an extent that vertical striping becomes ~~become~~ difficult to observe.

Claim 10 (Currently Amended): A semiconductor display device comprising:

a source signal line driver circuit;

a gate signal line driver circuit;

a plurality of source signal lines;

a plurality of gate signal lines;

a pixel portion; and

a display signal generation portion,

wherein the pixel portion has a plurality of pixels, each containing a pixel TFT and a pixel electrode,

wherein the display signal generation portion has: a control portion; a polarity data signal generation portion; an alternating current signal generation portion; a display signal selection portion; a + side display signal generation portion; and a - side display signal generation portion,

wherein the pixel electrodes are arranged in multiple vertical lines and ~~wherein display signals input to pixel electrodes in a vertical line have a same polarity~~ polarities of the display signals input to pixel electrodes in a vertical line change together, and

wherein a particular polarity of display signals input to the pixels electrodes in the vertical line is changed randomly in a certain fixed period.

Claim 11 (Previously Presented): A semiconductor display device according to claim 7, wherein a polarity of display signals input to only some of the pixel electrodes changes in two adjacent frame periods.

Claim 12 (Currently Amended): A method of driving a semiconductor display device comprising a plurality of pixels, each containing a pixel TFT and a pixel electrode; an opposing electrode; and a liquid crystal formed between the pixel electrode and the opposing electrode;

wherein display signals are input to the pixel electrode through the pixel TFT,

wherein each of the display signals input to the pixel electrode has one of a positive polarity and a negative polarity, with an electric potential of the opposing electrode as a standard,

wherein the pixel electrodes are arranged in multiple vertical lines and ~~wherein display signals input to pixel electrodes in a vertical line have a same polarity~~ polarities of the display signals input to pixel electrodes in a vertical line change together, and

wherein a particular polarity of display signals input to the pixels electrodes in the vertical line is changed randomly in a certain fixed period, to an extent that flicker becomes ~~become~~ difficult to observe.

Claim 13 (Currently Amended): A semiconductor display device comprising:

a source signal line driver circuit;

a gate signal line driver circuit;

a plurality of source signal lines;

a plurality of gate signal lines;

a pixel portion; and

a display signal generation portion,

wherein the pixel portion has a plurality of pixels, each containing a pixel TFT and a pixel electrode,

wherein the display signal generation portion has: a control portion; a polarity data signal generation portion; an alternating current signal generation portion; a display signal selection portion; a + side display signal generation portion; and a - side display signal generation portion,

wherein the pixel electrodes are arranged in multiple vertical lines and ~~wherein display signals input to pixel electrodes in a vertical line have a same polarity~~ polarities of the display signals input to pixel electrodes in a vertical line change together, and

wherein a particular polarity of display signals input to the pixels electrodes in the vertical line is changed randomly in a certain fixed period, to an extent that flicker becomes ~~become~~ difficult to observe.

Claim 14 (Currently Amended): A semiconductor display device comprising:

a source signal line driver circuit;

a gate signal line driver circuit;
a plurality of source signal lines;
a plurality of gate signal lines;
a pixel portion; and
a display signal generation portion,

wherein the pixel portion has a plurality of pixels, each containing a pixel TFT and a pixel electrode,

wherein the display signal generation portion has: a control portion; a polarity data signal generation portion; an alternating current signal generation portion; a display signal selection portion; a + side display signal generation portion; and a - side display signal generation portion,

wherein ~~display signals input to pixel electrodes in a vertical line have a same polarity~~
polarities of the display signals input to pixel electrodes in a vertical line change together, and

wherein pixels to which display signals having a particular polarity are input are changed irregularly in a certain fixed period, to an extent that vertical striping becomes ~~become~~ difficult to observe.

Claim 15 (Previously Presented): A method of driving a semiconductor display device according to claim 12, wherein a polarity of display signals input to only some of the pixel electrodes changes in two adjacent frame periods.

Claim 16 (Canceled)

Claim 17 (Canceled)

Claim 18 (Previously Presented): A method of driving a semiconductor display device according to claim 2, wherein a polarity of display signals input to only some of the pixel electrodes changes in two adjacent frame periods.

Claim 19 (Previously Presented): A method of driving a semiconductor display device according to claim 3, wherein a polarity of display signals input to only some of the pixel electrodes changes in two adjacent frame periods.

Claim 20 (Previously Presented): A method of driving a semiconductor display device according to claim 4, wherein a polarity of display signals input to only some of the pixel electrodes changes in two adjacent frame periods.

Claim 21 (Previously Presented): A semiconductor display device according to claim 8, wherein a polarity of display signals input to only some of the pixel electrodes changes in two adjacent frame periods.

Claim 22 (Previously Presented): A semiconductor display device according to claim 9, wherein a polarity of display signals input to only some of the pixel electrodes changes in two adjacent frame periods.

Claim 23 (Previously Presented): A semiconductor display device according to claim 10, wherein a polarity of display signals input to only some of the pixel electrodes changes in two adjacent frame periods.

Claim 24 (Currently Amended): A method of driving a semiconductor display device comprising a plurality of pixels, each containing a pixel TFT and a pixel electrode; an opposing electrode; and a liquid crystal formed between the pixel electrode and the opposing electrode; wherein display signals are input to the pixel electrode through the pixel TFT, wherein each of the display signals input to the pixel electrode has one of a positive polarity and a negative polarity, with an electric potential of the opposing electrode as a standard,

wherein the pixel electrodes are arranged in multiple vertical lines and ~~wherein display signals input to pixel electrodes in a vertical line have a same polarity~~ polarities of the display signals input to pixel electrodes in a vertical line change together, and

wherein a particular polarity of display signals input to the pixels electrodes in the vertical line is changed randomly in a certain fixed period, to an extent that vertical striping becomes ~~become~~ difficult to observe.

Claim 25 (Previously Presented): A method of driving a semiconductor display device according to claim 24, wherein only some of pixel electrodes have an inverse polarity in two adjacent frame periods.

Claim 26 (Previously Presented): A semiconductor display device according to claim 13, wherein a polarity of display signals input to only some of pixel electrodes have an inverse polarity in two adjacent frame periods.

Claim 27 (Previously Presented): A semiconductor display device according to claim 14, wherein a polarity of display signals input to only some of pixel electrodes have an inverse polarity in two adjacent frame periods.

Claim 28 (Previously Presented): A method of driving a semiconductor display device according to claim 4, wherein the polarity of display signals input to all of the pixel electrodes in the vertical line is changed randomly in the certain fixed period.

Claim 29 (Previously Presented): A method of driving a semiconductor display device according to claim 4, wherein the polarities of display signals input to multiple ones of the vertical lines of pixel electrodes are changed randomly in the certain fixed period.

Claim 30 (Previously Presented): A semiconductor display device according to claim 10, wherein the polarity of display signals input to all of the pixel electrodes in the vertical line is changed randomly in the certain fixed period.

Claim 31 (Previously Presented): A semiconductor display device according to claim 10, wherein the polarities of display signals input to multiple ones of the vertical lines of pixel electrodes are changed randomly in the certain fixed period.

Claim 32 (Previously Presented): A method of driving a semiconductor display device according to claim 12, wherein the polarity of display signals input to all of the pixel electrodes in the vertical line is changed randomly in the certain fixed period.

Claim 33 (Previously Presented): A method of driving a semiconductor display device according to claim 12, wherein the polarities of display signals input to multiple ones of the vertical lines of pixel electrodes are changed randomly in the certain fixed period.

Claim 34 (Previously Presented): A semiconductor display device according to claim 13, wherein the polarity of display signals input to all of the pixel electrodes in the vertical line is changed randomly in the certain fixed period.

Claim 35 (Previously Presented): A semiconductor display device according to claim 13, wherein the polarities of display signals input to multiple ones of the vertical lines of pixel electrodes are changed randomly in the certain fixed period.

Claim 36 (Previously Presented): A method of driving a semiconductor display device according to claim 24, wherein the polarity of display signals input to all of the pixel electrodes in the vertical line is changed randomly in the certain fixed period.

Claim 37 (Previously Presented): A method of driving a semiconductor display device according to claim 24, wherein the polarities of display signals input to multiple ones of the vertical lines of pixel electrodes are changed randomly in the certain fixed period.

Claim 38 (New): A semiconductor display device according to claim 14, wherein the polarity of display signals input to all of the pixel electrodes in the vertical line is changed randomly in the certain fixed period.

Claim 39 (New): A semiconductor display device according to claim 14, wherein the polarities of display signals input to multiple ones of the vertical lines of pixel electrodes are changed randomly in the certain fixed period.

Claim 40 (New): A method of driving a semiconductor display device comprising a plurality of pixels, each containing a pixel TFT and a pixel electrode, an opposing electrode, and a liquid crystal formed between the pixel electrode and the opposing electrode, the method comprising:

inputting display signals to the pixel electrode through the pixel TFT, wherein each of the display signals input to the pixel electrode has one of a positive polarity and a negative polarity, with an electric potential of the opposing electrode as a standard;

controlling the display signals input to pixel electrodes in a vertical line to have a same polarity; and

irregularly changing the pixels to which display signals having a particular polarity are input in a certain fixed period having a duration that exceeds four frame periods.

Claim 41 (New): A method of driving a semiconductor display device according to claim 40, the method further comprising controlling the polarities of the display signals so that the polarities of only some of the pixel electrodes change in two adjacent frame periods.

Claim 42 (New): A method of driving a semiconductor display device according to claim 40, wherein irregularly changing the pixels to which display signals having a particular polarity are input comprises doing so to an extent that flicker becomes difficult to observe.

Claim 43 (New): A method of driving a semiconductor display device according to claim 40, wherein irregularly changing the pixels to which display signals having a particular polarity are input comprises doing so to an extent that vertical striping becomes difficult to observe.

Claim 44 (New): A semiconductor display device comprising:
a source signal line driver circuit;
a gate signal line driver circuit;
a plurality of source signal lines;
a plurality of gate signal lines;
a pixel portion; and
a display signal generation portion,
wherein the pixel portion has a plurality of pixels, each containing a pixel TFT and a pixel electrode,
wherein the display signal generation portion includes a control portion; a polarity data signal generation portion; an alternating current signal generation portion; a display signal selection portion; a + side display signal generation portion; and a - side display signal generation portion,
wherein display signals input to pixel electrodes in a vertical line have a same polarity, and
wherein pixels to which display signals having a particular polarity are input are changed irregularly in a certain fixed period having a duration that exceeds four frame periods.

Claim 45 (New): A semiconductor display device according to claim 44, wherein a polarity of display signals input to only some of the pixel electrodes changes in two adjacent frame periods.

Claim 46 (New): A semiconductor display device according to claim 44, wherein pixels to which display signals having a particular polarity are input are changed irregularly to an extent that flicker becomes difficult to observe.

Claim 47 (New): A semiconductor display device according to claim 44, wherein pixels to which display signals having a particular polarity are input are changed irregularly to an extent that vertical striping becomes difficult to observe.